

Claims 1, 40, 78, and 81-117 remain pending in this application, with claims 40, 78, 81, 82, and 92-113 having been withdrawn.

Entry of this Amendment under 37 C.F.R. § 1.116 is respectfully requested to place the case in better condition for appeal.

The amendment to claim 1 has been presented for the purpose of correcting a reference to an antecedent basis. In particular, the term “supplemental restraint system” is recited in the preamble of claim 1.

The amendment to claim 117 has been presented for correcting typographical errors, inasmuch as the word “of” has been deleted and the term “to generant” should read “to generate”. Additionally, claim 117 has also been amended to correct a reference to antecedent basis. The term “balloon” is recited in the preamble of claim 1, from which claim 117 depends.

These amendments do not raise any new issues requiring further consideration and/or search. Moreover, the amendments place the application in better form for appeal by removing possible informalities that could be objected to during appeal. In the event that the Examiner disagrees and refuses entry of this Amendment, it is respectfully requested that the Examiner expressly identify the particular claim amendment that is viewed by the Examiner as encumbering entry of this Amendment.

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Claims 1, 83-91, and 114-117 remain rejected under the judicially created doctrine of obviousness-type double patenting over claims 31, 36, 49, and 66 of U.S. Patent No. 5,725,699.

Filed herewith is a Terminal Disclaimer. Entry of the Terminal Disclaimer will simplify issues on appeal by rendering this rejection moot.

Applicant points out that the present application is currently assigned in the name of Cordant Technologies Inc., whereas the listed assignee name on the '699 patent is Thiokol Corporation. It is respectfully submitted that these corporations are the same legal entity. The Examiner's attention is directed to the official change of name document attached hereto. This document was previously submitted to the U.S. Patent & Trademark Office in connection with the above-referenced application on October 26, 1998.

Accordingly, approval and entry of the terminal disclaimer and withdrawal of this rejection are in order.

Claim 1 remains rejected as anticipated by Cook et al., Rausch, and Hommel et al. Claims 1, 83-91, and 114-117 remain rejected under 35 U.S.C. § 103 as unpatentable over Cook et al. and Hommel et al., in view of Christmann et al.

These rejections are respectfully traversed.

These rejections appear to turn on the Examiner's decision to afford no weight to alleged "intended use" limitations of the claims:

Applicants' arguments are without merit. It is hornbook law that the intended use of a composition, here, a known compound, will not define over the same compound for a different use. It is clear that a new intended use does not confer patentability on an otherwise old composition. See, for example, *In re Thuau*, 135 F.2d 344, 1943 C.D. 390, *In re Pearson*, 181 USPQ 641, and *In re Touminen*, 213 USPQ 89.

Applicant agrees that where a claimed composition and a prior art composition are identical, the recitation of an intended use in the claims does not impart patentability on the claimed composition. However, this "hornbook law" is not applicable here.

Rather, claim 1 further characterizes its adaptation to the claimed composition by specifying that the composition, when combusted, generates a mixture of gases suitable for use in deploying an air bag or balloon from a supplemental restraint system. Stated differently, the composition is defined by a property, *i.e.*, suitability for a supplemental restraint system, that the composition possesses upon combustion. This property may be realized by formulating or adaptation of the composition in the manner described in the specification.

This very issue has already been decided in case law. *Ex parte Conner*, 215 U.S.P.Q. 384 (Pat. & Tr. Off. Bd. of Appeals 1981) involved similar claim language, in which the claimed composition was stated to be "adapted for application to the human skin." The Board held that the claimed adaptation language was to be afforded patentable weight:

The claims require that the claimed compositions be “adapted for application to the human skin” and are composed of “a cosmetic oil carrier * * *” in addition to benzalpthalide. The references relied upon by the Examiner do not disclose benzalpthalide in combination with a cosmetic oil carrier which compositions are suitable for application to the human skin. The various compositions of several of the references contain additional ingredients, e.g. sodium hydroxide or styrene, *which would have rendered the compositions unsuitable for application to the human skin.* The characterization in the claims that the compositions are “adapted for application to the human skin” *imposes a limitation in the claims which cannot be ignored in considering the patentability of the claims.*

Ex parte Wittpenn, 16 U.S.P.Q.2d 1730 (Bd. of Pat. Appeals & Inter. 1990) sets forth a similar holding. The Board held that the recitation in the preamble of a claim that a composition has “good foaming characteristics and such non-irritating characteristics that it is suitable for use on periocular surface tissues” was entitled to patentable weight. *Wittpenn*, 16 U.S.P.Q.2d at 1730. The Board found the Examiner to be in error, inasmuch as the “noted limitation in the instant claims cannot be ignored.” *Id.* at 1731.

Indeed, the cases cited by the Examiner provide support for Applicant’s position.

We do not mean to imply that terms which recite the intended use or a property of a composition can never be used to distinguish a new from an old composition. However, assuming their compliance with the definiteness requirement of the secondary paragraph of 35 U.S.C. § 112, such terms must define, indirectly at least, some characteristic not found in the old composition. For example, if calcium compounds of very small particle size had not been known to the prior art, then a term defining the particle as being of a size which “when applied to the foliage of a

peanut crop will substantially reduce the formation of pops and unsound kernels” might be capable of distinguishing the new composition from the old.

In re Pearson, 494 F.2d 1399, 1403, 181 U.S.P.Q. 641 (C.C.P.A. 1974)

(emphasis added).

Applicant respectfully submits that a similar holding is warranted here. The claim terminology “suitable for” is tantamount to “adapted for”. Further, the Board of Patent Appeals and Interferences has already addressed the patentable weight to be afforded to the language “suitable for” in *Ex parte Wittpenn*.

Cook is directed to a composition containing ammonium nitrate as “the preponderant ingredient, that is, in an amount greater than 50%.” Column 2, lines 14-16. Likewise, Hommel relates to a particulate ammonium nitrate for solid fuels or explosives. Neither of these patents discloses a composition that generates a gas mixture ***suitable for*** use in deploying an air bag or balloon from a supplemental restraint system. In particular, the high concentrations of ammonium nitrate described by the Cook and Hommel patents are ***unsuitable*** for the high temperature requirements of a secondary restraint system, because ammonium nitrate is prone to disassociation at high temperatures. The hygroscopicity of ammonium nitrate makes it further unsuited for use in a supplemental restraint system. Additionally, compositions containing large amounts of ammonium nitrate

have flame temperatures that lead to excessive NO_x and CO production, which is unacceptable for supplemental restraint systems. Finally, compositions containing large amounts of ammonium nitrate tend to have high pressure exponents and temperature sensitivity leading to large variability in performance and reduced safety margins. Given all of these characteristics of the ammonium nitrate-rich compositions of Cook and Hommel, a person of ordinary skill in the art would not have been motivated to modify the compositions disclosed in these U.S. patents for the purpose of making them suitable for supplemental restraint systems.

The thermite composition of Rausch also is unsuited as a gas generant of a supplemental restraint system. The thermite would burn so intensely as to melt the housing and other components of a supplemental restraint system. As for the Examiner's citation to U.S. Patent No. 5,439,537 to Hinshaw et al., Applicant submits that the Hinshaw et al. patent is not inconsistent with arguments made by former counsel. The Examiner's attention is directed to column 4, lines 23-25, which are reproduced below:

One of the distinguishing characteristics of most conventional thermite compositions is that they are designed to produce little or no gaseous reaction products.

The Rausch compound is typical of these conventional thermite compositions, which is why its intended use is described as being that of a

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fuel, not gas generant. The compositions of Rausch would, therefore, not be suitable for use in secondary restraint systems.

Christmann et al., which was cited for its alleged disclosure of water repelling agents of salts of fatty acids in nitrate explosives, does not overcome the fundamental deficiencies of Cook and Hommel.

Accordingly, withdrawal of the Section 102 and 103 rejections are respectfully requested.

If, after reviewing the above, the Examiner believes that the attached amendments are not suited for entry, the favor of an Examiner interview is requested and the Examiner is requested to contact the undersigned, by telephone, to schedule same.

Respectfully submitted,

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MARKED-UP VERSION OF AMENDED CLAIMS

1. (Thrice amended) A solid gas generating composition formulated for generating gas suitable for use in deploying an air bag or balloon from a supplemental restraint system, said solid gas generating composition comprising:

a complex of a metal cation and a neutral ligand containing hydrogen and nitrogen, such that when the complex combusts, a mixture of gases suitable for use in deploying an air bag or balloon from [a] the supplemental restraint system is produced; and

sufficient oxidizing anion to balance the charge of the metal cation.

117. (Twice amended) A solid gas generating composition according to claim 85, wherein when said composition combusts, the combustion [of] takes place at a rate and a temperature sufficient to qualify said composition for use as a gas generating composition to [generant] generate gas suitable for use in deploying said air bag or said [balloons] balloon.